



## Taxonomy & Inventories

# Auchenorrhyncha (Hemiptera) from Crete deposited at the Natural History Museum of Crete

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Academic editor: J. Adilson Pinedo-Escatel

Received: 05 Nov 2025 | Accepted: 01 Jan 2026 | Published: 30 Jan 2026

Citation: Angelova R, Gjonov I, Trichas A (2026) Auchenorrhyncha (Hemiptera) from Crete deposited at the Natural History Museum of Crete. Biodiversity Data Journal 14: e177170.

<https://doi.org/10.3897/BDJ.14.e177170>

## Abstract

## Background

Crete, the largest island in Greece, is characterised by its diverse landscapes, ranging from coastal ecosystems to high-altitude mountain ranges. Its complex geological history, Mediterranean climate and varied vegetation types have contributed to a rich and unique biodiversity, including numerous endemic species. These environmental factors create favourable conditions for the diversification of insect fauna, including members of the suborder Auchenorrhyncha.

Auchenorrhyncha are sap-feeding insects within the order Hemiptera. They are divided into two major infraorders: Cicadomorpha and Fulgoromorpha. According to published records, the Auchenorrhyncha fauna of Crete includes two families from the superfamily Cercopoidea — Cercopidae with one species and Aphrophoridae with four species — along with the superfamilies Cicadoidea (1 family, 3 species) and Membracoidea (1 family, 75 species), all of which belong to Cicadomorpha (83 in total). The infraorder Fulgoromorpha, distinct from the aforementioned group, has 57 species across seven families. In total, 140 species of Auchenorrhyncha have been recorded on the Island.



## New information

An analysis of 2,849 specimens from over 400 localities in Crete, housed at the Natural History Museum of Crete (NHMC), revealed 93 Auchenorrhyncha species across 10 families, representing approximately 64% of the Island's known fauna. Despite limitations in sampling methods, 37 species were newly recorded for Crete, 10 of which are also new to Greece and 13 genera were reported from Crete for the first time. The Island's known Auchenorrhyncha fauna now totals 177 species, underscoring the importance of museum collections and continued entomological research. Additionally, an updated checklist of the Auchenorrhyncha in Crete is provided as supplementary material.

## Keywords

Cicadomorpha, Fulgoromorpha, Greece, museum collection

## Introduction

Crete is the largest Greek island and the one situated closest to North Africa. It occupies a unique biogeographic position at the crossroads of Europe, Asia and Africa, contributing to a distinctive blend of flora and fauna from all three continents. The Island's rich and diverse flora and fauna are the result of its long-term geographic isolation, complex topography and mild Mediterranean climate. These factors have created a mosaic of microclimates that support a high number of rare and endemic species (Lazarina et al. 2019). Over 2,000 vascular plant species have been documented on Crete, approximately 14% of which are endemic (Lazarina et al. 2019, Menteli et al. 2019). Crete is also a major migratory corridor for birds and a key area for biodiversity conservation in the Mediterranean Region (Vogiatzakis et al. 2020).

The natural vegetation of the Island primarily consists of sclerophyllous evergreen forests — mainly *maquis* and *phrygana* — covering only about 2% of the Island's surface, while the mountainous areas are dominated by dwarf shrublands (Zimowski et al. 2013). Crete is divided into four regional units (nomoi), arranged from west to east: Chania, Rethymno, Heraklion and Lasithi. Heraklion is the largest city and functions as the Island's capital. To the north lie the islands of Dia and the Dionysades group, while to the south are Koufonisi, Gaidouronisi, Paximadia, Gavdopoula and Gavdos - the southernmost point of Greece (Vogiatzakis and Rackham 2008).

The Island is traversed by several mountain ranges from west to east: the Lefka Ori (2,454 m), Kedros (1,777 m), Ida or Psiloritis (2,456 m), Kofinas (1,231 m), Dikti (2,085 m), Thripti (1,476 m) and Ornos (819 m). These Cretan mountains, part of the Dinaric system, are marked by steep slopes, deep gorges and abundant karst formations. Combined with caves and isolated habitats, they further enhance the island's ecological diversity. The entire Island lies within a highly seismic zone. Major agricultural crops include grapevines, olive, orange and fig trees (Grove and Rackham 1993, Legakis et al. 1993).



The long-term isolation, absence of large predators and limited colonisation by mainland species have led to the evolution of highly adapted, often endemic fauna. This is especially true for invertebrates, such as insects, where phytophagous groups like Auchenorrhyncha exhibit notable diversity and specialisation towards local flora.

Auchenorrhyncha, a suborder of Hemiptera and part of the hemimetabolous insects (Hemimetabola), includes four monophyletic suborders: Sternorrhyncha, Auchenorrhyncha, Heteroptera and Coleorrhyncha. Their phylogenetic relationships remain under debate, although Auchenorrhyncha is believed to have originated in the Early Permian (Holzinger et al. 2003). It comprises two main infraorders: Cicadomorpha and Fulgoromorpha. The former includes the superfamilies Cercopoidea (spittlebugs), Cicadoidea (periodical cicadas) and Membracoidea (with the families Membracidae and Cicadellidae), while Fulgoromorpha includes superfamilies Fulgoroidea with 17 families, Delphacoidea with three families and Meenoploidea with two extant families. Globally, over 47,000 species have been described (Dimitriev et al. 2022), with numbers growing annually. Most species feed on plant sap — either from the phloem, xylem or parenchyma — though some nymphs of Derbidae and Achilidae feed on fungal hyphae (Nickel 2003, Dietrich 2009, Bartlett and Wilson 2023). They are predominantly mono- or oligophagous, with a few exceptions (Denno and Perfect 1994, Nickel 2003).

To date, the Auchenorrhyncha fauna of Crete include representatives of the superfamilies Cercopoidea, Cicadoidea and Membracoidea. Cercopoidea is represented by one species from the family Cercopidae and three from the family Aphrophoridae. The superfamily Cicadoidea comprises two families with a total of seven species. However, four of these *Aestuansella aestuans* (Fabricius, 1794) (Lucas 1854), *Cicada orni* Linnaeus, 1758 (Haupt 1928), *Dimissalna dimissa* (Hagen, 1856) (Haupt 1928, Nast 1972) and *Oligoglana tibialis* (Panzer, 1798) (Haupt 1928, Nast 1972) were not confirmed in recent studies and their earlier records are considered doubtful, as previously noted by Quartau and Simões (2005) and Trilar et al. (2020). Superfamily Membracoidea is represented solely by the family Cicadellidae with 75 recorded species. The infraorder Fulgoromorpha comprises 57 species across seven families, making a total of 140 documented Auchenorrhyncha species on the Island. The first recorded species from Crete was *Issus palipes* Lucas, 1853 (Issidae), later reclassified as a likely nymph of the genus *Tettigometra* (Tettigometridae) by Gnezdilov (2017), based on Lucas's original illustration and description.

In this study, a total of 2849 specimens of Auchenorrhyncha, collected from more than 400 different localities on the island of Crete and deposited at the Natural History Museum of Crete, were examined. A portion of the material was derived from soil traps during earlier surveys conducted between 1988 and 2018 and was previously identified to the order level. Additional specimens were collected by the first author using sweep netting and aspirator during fieldwork from May to September 2023.

The present study identified 93 species belonging to 11 families of the suborder Auchenorrhyncha and deposited in the collection of the Natural History Museum of Crete. These account for approximately 64% of the known Auchenorrhyncha species from



Crete. Amongst the identified taxa, 37 species are newly recorded for Crete, 10 of which are also new to Greece and 13 genera are reported for Crete for the first time, nine of the species present in the collection are considered as endemic for the island and another four are endemic for Greece. A dataset containing the occurrence records for all specimens has been published on the GBIF (Angelova et al. 2025a).

## **Materials and methods**

### **Survey Period**

The present study includes 2849 specimens from over 400 different localities on the Island of Crete, deposited in the Natural History Museum of Crete. Most of the material was obtained from pitfall traps collected during previous research by the Natural History Museum of Crete, gathered between 1988 and 2018 and another part was collected by the first author between May and September 2023 using sweep netting with an entomological net and aspirator.

### **Survey Areas**

The material comes from diverse habitats and altitudes on the Island of Crete and adjacent smaller islands, such as Dia, Gavdos, Gavdopoula and Elafonisi. Complete information on the collection sites is provided in a GBIF dataset (Angelova et al. (2025), <https://doi.org/10.15468/xh2zmd>).

## **Field Methods**

### **Pitfall Trap Method**

The zoological material from the alcohol collection of the Natural History Museum of Crete was collected using pitfall traps and sorted to the order level, stored in ethanol (75-96%). Standard-sized cups (9.5 cm in diameter and 12 cm in height) were used, placed following a standardised setup. Ethylene glycol and undiluted propylene glycol were used as killing/preserving agents. Occasionally, small amounts of attractants like vinegar were used, along with liquid soap to reduce surface tension. Large stones were placed over the traps to prevent damage from grazing animals (flocks of sheep and goats on the Island). A more detailed description of the pitfall trap methods applied by NHMC between 1988 and 2018 is provided in Salata et al. (2020) and references therein.

### **Sweep Netting with Entomological Net**

Material collected using sweep netting and an aspirator. The net consisted of a steel ring with a cotton bag, based on some Czech models, with a ring diameter of 35 cm. The handle was improved to be detachable into three parts for easier transportation. The aspirator was made using a cork stopper, a stainless steel inlet tube (220 mm long, 5 mm outer diameter) and a shorter outlet tube with an attached hose equal in length to an arm.



Both tubes pierced the cork, which fitted tightly into the neck of a 50 ml centrifuge tube (30 mm diameter, 120 mm long). Inside the tube, a cotton plug was placed to provide a larger contact surface, preventing smaller insects from becoming overly moist and structurally damaged. A thin, long strip of folded filter paper was also added to absorb excess moisture and separate the interior space of the tube. Ethyl acetate was applied through the inlet tube, followed by inserting a cotton plug soaked with a few drops of the substance. Following a period of approximately 24 hours exposure to ethyl acetate vapours, the material was subjected to desiccation and stored until it was mounted on cotton layers.

## Laboratory Methods

Dry specimens, collected by sweepnet and aspirator, were rehydrated before mounting in a small container with a few drops of water. Alcohol-preserved material was prepared after drying on filter paper.

### Mounting

Each specimen was glued with entomological adhesive to a properly-sized mounting card, then mounted on an entomological pin in a position allowing observation of key taxonomic and sexual features. Male genital segments were dissected and placed in a drop of distilled water (or 10% sodium hydroxide solution) in a small flat-bottomed test tube for a few minutes to macerate. This allowed for the safe opening of the genital capsule and easier removal of fat and muscle tissue and, after that, all of the structures were glued on the same mounting card as the specimen. Preparation was done under a Leica M60 stereomicroscope at suitable magnification.

## Collection Organisation

Specimens from the Natural History Museum of Crete were recorded in the Museum's internal database. Museum-provided labels were attached to the pin of each specimen. Each had two labels: the upper indicating sex and the lower containing collection info. Specimens were arranged in taxonomic order in wooden boxes with glass lids. The material is stored at the Natural History Museum of Crete (NHMC), curated by Apostolos Trichas PhD. A dataset has been generated containing metadata for all specimens in the collection. The dataset has been published on the GBIF platform and is accessible via <https://doi.org/10.15468/xh2zmd> (Angelova et al. 2025a).

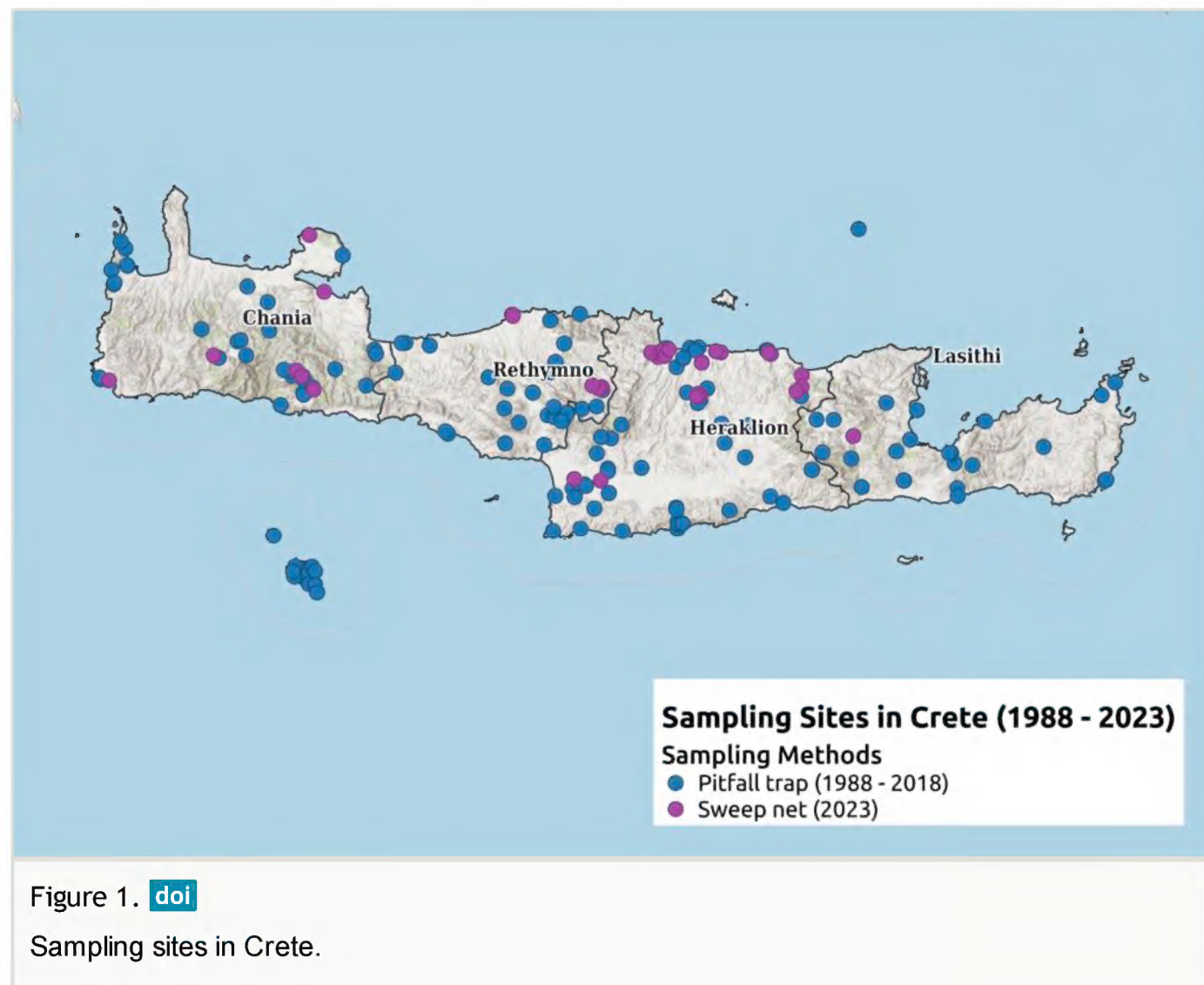
## Spatial Distribution Analysis and Map Creation

The CSV file from the database was used as a layer in the open-source GIS software QGIS 3.22.4 Białowieża for spatial analysis. An OpenStreetMap layer was preloaded as the base map, with a shapefile overlay showing the borders of the four administrative regions of Crete – Chania, Rethymno, Heraklion and Lasithi.



## Results

An analysis of specimens housed at the Natural History Museum of Crete (NHMC) involved the study of 2849 specimens from over 400 localities across the Island (Fig. 1). A total of 93 Auchenorrhyncha species were identified and prepared, representing 10 different families. These specimens represent 52.5% of the known species for the Island, demonstrating the value of the collection despite the challenges posed by the primary collection method (soil traps) and the limited duration of sampling with the most effective method (sweeping with an entomological net).



Amongst the identified species, 37 are newly recorded for Crete, 10 of which are also new to Greece. Additionally, 10 genera are reported for Crete for the first time and the total number of recorded Auchenorrhyncha species on Crete has increased to 177. These findings highlight the importance of museum collections in documenting insect diversity and underscore the need for continued entomological research to uncover the full extent of Auchenorrhyncha diversity on the Island.

The species included in the collection of the Natural History Museum of Crete are presented in taxonomic order. Synonyms under which each species has previously been reported for the Island of Crete are indicated. Hyperlinks with identifiers to two major databases - GBIF and 3I World Auchenorrhyncha Database (Dimitriev et al. 2022) - are provided. Localities are listed first according to literature records, where available,

followed by newly-collected material. Additional notes are included regarding collection details, collection method, phenology, elevation and remarks on species distribution. Species newly recorded for Crete are marked with an asterisk (\*), while species new to Greece are indicated with two asterisks (\*\*). An updated checklist of the Auchenorrhyncha species of Crete is provided as a supplementary file (Suppl. material 1).

## Auchenorrhyncha

### Infraorder Fulgoromorpha Evans, 1946

### Superfamily Fulgoroidea Latreille, 1807

### Family Achilidae Stål, 1866

### Subfamily Achilinae Stål, 1866

### Tribe Achilini Stål, 1866

### Subtribe Cixidiina Emeljanov, 1993

### Genus *Cixidia* Fieber, 1866

### Subgenus *Epiptera* Metcalf, 1922

### *Cixidia (Epiptera) skaloula* Asche, 2015

- GBIF <https://www.gbif.org/species/12178314>
- TaxonWorks <https://hoppers.speciesfile.org/otus/1032423>

**Distribution:** **Literature data:** no specific location (Asche 2015). **New data:** Chania: Lake Agia.

**Notes:** Collected in pitfall trap from May to June at 44 m a.s.l. There are reports that the species occurs under the bark of decaying trees, where it probably feeds on the hyphae of saprotrophic fungi in the wood (Asche 2015).



## Genus *Neomenocria* Fennah, 1950

### *Neomenocria cretica* Asche, 2015

- GBIF [missing](#)
- TaxonWorks <https://hoppers.speciesfile.org/otus/1032426>

**Distribution: Literature data:** Lassithi: Agios Ioannis (Dlabola 1977); no specific location (Dlabola 1989, Asche 2015). **New data:** Chania: on the road from Mochlos to Sfendili.

**Notes:** Considered endemic to Crete (Asche 2015). The species was collected by sweep netting in mid-June on the low branches of trees of the genus *Quercus* at 463 m a.s.l.

## Family Issidae Spinola, 1839

### Subfamily Hysteropterinae Melichar, 1906

### Tribe Hysteropterini Melichar, 1906

## Genus *Acrestia* Dlabola, 1980

### Subgenus *Acrestia* Dlabola, 1980

### *Acrestia (Acrestia) suturalis* (Fieber, 1877)

- GBIF <https://www.gbif.org/species/9370986>
- TaxonWorks <https://hoppers.speciesfile.org/otus/73233>

#### Nomenclature:

*Bubastia (Acrestia) suturalis* (Fieber, 1877) in Gnezdilov et al. (2004).

**Distribution: Literature data:** no specific locations (Gnezdilov 2016). Chania: Therissos; Pithari; Lefka ori (Gnezdilov et al. 2004). **New data:** Chania: Lefka Ori peak Troharis; Lake Kournas; Rethymno: Psiloritis, above Anogia on route E4. Heraklion: Koudoumas; Sterne; Giouchtas Mt.

**Notes:** Collected in pitfall traps left throughout the year up to 2347 m a.s.l. and by sweep netting in July and August on dry grasses up to 1111 m a.s.l.



## Genus *Agalmatium* Emeljanov, 1971

### *Agalmatium bilobum* (Fieber, 1877)

- GBIF <https://www.gbif.org/species/2051533>
- TaxonWorks <https://hoppers.speciesfile.org/otus/73244>

**Distribution: Literature data:** surroundings Heraklion (Gnezdilov et al. 2004). **New data:** Chania: Gramvousa Peninsula; Gavdopula Island; Kouroupitos. Rethymno: Petres dunes; Mikronisi Island. Heraklion: Almyros River park; Gazi; Karteros; Lavris; on the road from Stalida to Mochlos; Rufas; Voroï; Platanos; Koudoumas; along the Almyros River; Kofinas; Siva; on the road from Mochlos to Sfendili; Aposelemis Dam; Sternes. Lasithi: Dikti Mountain; Xerocampos; Bramiana Dam; Mochlos; Pahia Amos.

**Notes:** Collected in pitfall traps for periods: from March to May and from May to August, collected by sweep netting from May to July. In the altitude profile – from sea level to 1105 m a.s.l. Occurs in dry habitats, polyphagous (Gnezdilov and Brien 2006).

## Genus *Clybeccus* Gnezdilov, 2003

### *Clybeccus declivum* (Dlabola, 1986)

- GBIF <https://www.gbif.org/species/7855000>
- TaxonWorks <https://hoppers.speciesfile.org/otus/73454>

**Distribution: Literature data:** Rethymno: Agia Galini (Gnezdilov 2011) and no specific locations (Gnezdilov et al. 2014). **New data:** Heraklion: Aposelemis wetland. Lasithi: Xerocampos.

**Notes:** Collected in pitfall traps from May to August near the coast at 1-2 m a.s.l.

## Genus *Latilica* Emeljanov, 1971

### *Latilica oertzeni* (Matsumura, 1910)

- GBIF <https://www.gbif.org/species/5982082>
- TaxonWorks <https://hoppers.speciesfile.org/otus/73310>

**Distribution: Literature data:** no specific locations (Gnezdilov 2010, Gnezdilov et al. 2014). **New data:** Chania: Gavdos Isl.

**Notes:** Collected in pitfall traps from June to August on the northwest coast of Gavdos Island – 8 m a.s.l.



## ***Latilica tunetana* (Matsumura, 1910)**

- GBIF <https://www.gbif.org/species/5982078>
- TaxonWorks <https://hoppers.speciesfile.org/otus/73848>

**Distribution: Literature data:** Chania: Moni Gonias; Lassithi: Gra Ligiots (Gnezdilov 2010) no specific locations (Gnezdilov et al. 2014). **New data:** Chania: Gavdos Isl.; Lefka Ori between Anopoli and Pachnes Peak; Stavros, Zorbas Beach; Lake Kournas. Rethymno: Grazo; Heraklion: Martsalo; Rufas; Petrokefali; near the Almyros River; Voroi; Siva; Gazi. Lasithi: Paheia Amos; Xerokampos.

**Notes:** Collected in pitfall traps left throughout the year up to 800 m a.s.l. and by sweep netting in June and July up to 116 m a.s.l.

## **Genus *Mycterodus* Spinola, 1839**

### **Subgenus *Mycterodus* Spinola, 1839**

#### ***Mycterodus (Mycterodus) lapaceki* Dlabola, 1984**

- GBIF <https://www.gbif.org/species/4489714>
- TaxonWorks <https://hoppers.speciesfile.org/otus/73970>

**Distribution: Literature data:** Chania: Hora Sfakion (Dlabola 1984) without specific locations (Gnezdilov et al. 2014). **New data:** Chania: Lefka Ori, Troharis peak; Heraklion: Koudoumas; Kofinas.

**Notes:** Known only from Crete and Kos (Gnezdilov et al. 2004). Collected in pitfall traps set from June to September from 639 to 2347 m a.s.l.

#### ***Mycterodus (Mycterodus) wittmeri* Dlabola, 1974**

- GBIF <https://www.gbif.org/species/4489711>
- TaxonWorks <https://hoppers.speciesfile.org/otus/73985>

**Distribution: Literature data:** Lasithi: Agios Nikolaos (Dlabola 1974b, Nast 1987, Gnezdilov et al. 2014). **New data:** Heraklion: Giouchtas Mt.

**Notes:** Considered endemic to Crete. It was described from Crete and there are no data on its discovery after the initial description. Single specimen from a pitfall trap set in late May and collected in late June at 596 m a.s.l.



## Subgenus *Semirotus* Dlabola, 1987

### \* *Mycterodus (Semirotus) colossicus* (Dlabola, 1987)

- GBIF <https://www.gbif.org/species/2051149>
- TaxonWorks <https://hoppers.speciesfile.org/otus/73987/overview>

**Distribution: New data:** Heraklion: Koudouma

**Notes:** New species for the fauna of Crete. Known only from Greek islands Rhodes, Karpathos, Naxos and Paros (Gnezdilov and Drosopoulos 2013, Gnezdilov et al. 2014), collected in pitfall traps from June to August up to 812 m a.s.l..

### *Mycterodus (Semirotus) idomeneus* Dlabola, 1984

- GBIF <https://www.gbif.org/species/2051148>
- TaxonWorks <https://hoppers.speciesfile.org/otus/73990>

**Distribution: Literature data:** Chania: Hora Sfakion (Dlabola 1984) and without specific locations (Gnezdilov et al. 2014). **New data:** Heraklion: Almyros River Park and along the mouth of the Karteros River; Koudouma. Rethymno: Ano Meros; Geropotamos bridge. Chania: Gramvousa Peninsula; Lefka Ori.

**Notes:** Considered endemic to Crete. Apart from the material from the species description, only one male specimen collected in 1975 is mentioned in literature (Gnezdilov et al. 2014). Single specimen from a pitfall trap set in late April and collected in late July at 766 m a.s.l. Collected by sweep netting in May and June up to 412 m a.s.l.

### *Mycterodus (Semirotus) pallens* Stål, 1861

- GBIF <https://www.gbif.org/species/2051156>
- TaxonWorks <https://hoppers.speciesfile.org/otus/73994>

**Distribution: Literature data:** Chania: Hora Sfakion (Dlabola 1984). **New data:** Chania: Elafonisi. Heraklion: Koudoumas.

**Notes:** Considered endemic to Greece. Collected in pitfall traps from April to October up to 817 m a.s.l.

### *Mycterodus* sp.

**Distribution: New data:** Chania: Kouroupitos; Elafonisi Isl.; Kournas Lake; Gramvousa Peninsula; Lefka Ori mt., Trocharis peak. Rethymno: Lochria; Ano Meros; Rizikas; Kouroutes. Heraklion: Giouchtas Mt.; Koudouma; Anapodaris; Kofinas; Sternes. Lasithi: Pacheia Ammos; Dikti Mt, Limnakaro pl.



**Notes:** All of them are females with a single nymph, collected in pitfall traps left throughout the year up to 1900 m a.s.l.

## Genus *Rhissolepus* Emeljanov, 1971

### *Rhissolepus insulanus* (Dlabola, 1982)

- GBIF <https://www.gbif.org/species/5982228>
- TaxonWorks <https://hoppers.speciesfile.org/otus/74129/overview>

**Distribution: Literature data:** Heraklion: Faistos; Matala; Gortys; Amnissos; Anatolien (Dlabola 1982, Gnezdilov et al. 2014, Gnezdilov 2016). **New data:** Heraklion: Keri's forest. Chania: Gramvousa Peninsula.

**Notes:** Known from Greece and Turkey only. Collected in single pitfall trap from May to June at 142 m a.s.l. and by sweep netting in May at 210 m a.s.l.

## Genus *Tshurtshurnella* Kusnezov, 1927

### \* *Tshurtshurnella pythia* Dlabola, 1979

- GBIF <https://www.gbif.org/species/4489646>
- TaxonWorks <https://hoppers.speciesfile.org/otus/74288/overview>

**Distribution: New data:** Chania: Gavdos Isl.; Lefka ori. Heraklion: Koudoumas.

**Notes:** Considered endemic to Greece (Dlabola 1979, Gnezdilov et al. 2014) and new species for the fauna of Crete. Collected in pitfall traps from April to September at 178-2000 m a.s.l.

## Family Tettigometridae Germar, 1821

### Tribe Tettigometrini Germar, 1821

### Genus *Tettigometra* Latreille, 1804

### Subgenus *Tettigometra* Latreille, 1804

### \* *Tettigometra* (*Tettigometra*) *impressifrons* Mulsant & Rey, 1855

- GBIF <https://www.gbif.org/species/2065046>
- TaxonWorks <https://hoppers.speciesfile.org/otus/76954>

**Distribution: New data:** Chania: Gavdos Isl.

**Notes:** New species for the fauna of Crete. This species is widespread in the Mediterranean. Single specimen from a pitfall trap, set in March and collected in June in a wetland on Gavdos Isl. at 259 m a.s.l.

**\*\* *Tettigometra (Tettigometra) picta* Fieber, 1865**

- GBIF <https://www.gbif.org/species/2065034>
- TaxonWorks <https://hoppers.speciesfile.org/otus/76962>

**Distribution: New data:** Chania: Lake Kournas. Heraklion: Koudoumas; Petrokefali; Aposelemis sand dunes; Gazi; Karteros River estuary. Lasithi: between Itanos and Vai.

**Notes:** New species for the fauna of Crete and new for Greece. The species is widespread in the western and central Mediterranean and is common on the islands. Found in pitfall traps from April to December up to 814 m a.s.l. Collected by sweep netting in May and June up to 307 m a.s.l.

***Tettigometra* sp.**

**Distribution: New data:** Rethymno: Prines, *Quercus macrocephalis* forest; Psiloritis, road from Anogia. Agios Mamas; Tigania. Heraklion: Koudouma; Lentas; Sternes; Kofinas.

**Notes:** Collected in pitfall traps from May to November from 69 to 1191 m a.s.l. and by sweep netting in August at 1192 m a.s.l. The specimens are unidentified, as several groups of species of the genus *Tettigometra* in the Mediterranean need to be thoroughly revised before reliable species identification can be made.



## Superfamily Delphacoidea Leach, 1815

### Family Cixiidae Spinola, 1839

### Subfamily Cixiinae Spinola, 1839

### Tribe Cixiini Spinola, 1839

### Genus *Cixius* Latreille, 1804

### Subgenus *Ceratocixius* Wagner, 1939

#### \* *Cixius (Ceratocixius) wagneri* China, 1942

- GBIF <https://www.gbif.org/species/2059302>
- TaxonWorks <https://hoppers.speciesfile.org/otus/58231/overview>

**Distribution: New data:** Heraklion: Omalos Plateau at Viannos wetland; Feneromeni wetland; Almyros River.

**Notes:** New species for the fauna of Crete. The species is widespread in southern Europe and parts of the Middle East (Dimitriev et al. 2022). Collected in pitfall traps from March to December at 19-1343 m a.s.l.

### Genus *Tachycixius* Wagner, 1939

### Subgenus *Tachycixius* Wagner, 1939

#### *Tachycixius (Tachycixius) creticus* Dlabola, 1974

- GBIF <https://www.gbif.org/species/4489832>
- TaxonWorks <https://hoppers.speciesfile.org/otus/58749>

**Distribution: Literature data:** no specific location (Nast 1987) Chania: Omalos; Sfakia. Rethymno: Gonia. Heraklion: Anogia. Lassithi: Kritsa; Mattia (Dlabola 1974a). **New data:** Chania: Lefka Ori, Troharis peak; road from Anopoli to Pachnes peak. Rethymno: Agios Mamas; Psiloritis; Lohria. Heraklion: Giouchtas Mt.; Kofinas; Koudoumas. Lassithi: Topleni monastery.

**Notes:** Known from Greece and Turkey only (Dlabola 1974a, Dlabola 1987). Collected in pitfall traps from March to September up to 2347 m a.s.l.

**Tribe Pentastirini Emeljanov, 1971****Genus *Hyalesthes* Signoret, 1865****Subgenus *Hyalesthes* Signoret, 1865*****Hyalesthes (Hyalesthes) obsoleta* Signoret, 1865**

- GBIF <https://www.gbif.org/species/5157391>
- TaxonWorks <https://hoppers.speciesfile.org/otus/59674>

**Distribution: Literature data:** Chania: Chania (Tsagkarakis et al. 2018) west of Paleochora (Dlabola 1977, Dlabola 1994). Rethymno: north of Moni Preveli (Dlabola 1977). Lasithi: Agios Nikolaos (Dlabola 1977). **New data:** Chania: Gramvousa peninsula; Lake Kournas; Heraklion: near the River Almyros.

**Notes:** Collected in pitfall traps from June to August up to 142 m a.s.l. Collected by sweep netting from May to July on *Vitex* sp. up to 210 m a.s.l.

***Hyalesthes (Hyalesthes) cf. obsoleta*****Genus *Pentastiridius* Kirschbaum, 1868****Subgenus *Pentastiridius* Kirschbaum, 1868*****Pentastiridius (Pentastiridius) leporinus* (Linnaeus, 1761)**

- GBIF <https://www.gbif.org/species/4489819>
- TaxonWorks <https://hoppers.speciesfile.org/otus/60365/overview>

**Nomenclature:**

*Oliarus leporinus* (Linnaeus, 1761) in Dlabola (1977)

**Distribution: Literature data:** Chania (Dlabola 1977). **New data:** 20 Rethymno: Lavris, Geropotamos Estuary. Heraklion: Almyros spring.

**Notes:** Single specimen collected from a pitfall trap from June to August at 5 m a.s.l. and three specimens by sweep netting from late May and early June at 4-142 m a.s.l.



**\*\* *Pentastiridius (Pentastiridius) cf. ovatus* (Metcalf, 1955)**

- GBIF <https://www.gbif.org/species/5983436>
- TaxonWorks <https://hoppers.speciesfile.org/otus/60521/overview>

**Distribution: New data:** Heraklion: Aposelemis sand dunes

**Notes:** New species for the fauna of Greece. So far, the species is known from Central Asia (Emeljanov 2015). Single specimen collected in a pitfall trap from August to November at 1 m a.s.l.

***Pentastiridius* sp.**

**Distribution: New data:** Heraklion: Aposelemis wetland

**Notes:** Collected in pitfall trap from late July to late November at 1 m a.s.l.

**Genus *Pentastira* Kirschbaum, 1868**

***Pentastira cf. demaculata* Dlabola, 1989**

- GBIF <https://www.gbif.org/species/5157410>
- TaxonWorks <https://hoppers.speciesfile.org/otus/60329/overview>

**Distribution: Literature data:** Chania: Moustakos (Dlabola 1989). **New data:** Rethymno: Rizikas. Heraklion: opposite site of NHMC exhib; Robos pilot orchard SW.

**Notes:** Considered endemic to Crete. Collected in pitfall traps from June to October at 14-229 m a.s.l.

***Pentastira demaculata/major***

**Distribution: New data:** Rethymno: Rizikas; Agios Mamas

**Notes:** Collected in pitfall traps from late April to late July at 251-671 m a.s.l. The specimens show intermediate characteristics between the two species. For their reliable identification, additional materials and methods are needed.

## Genus *Reptalus* Emeljanov, 1971

### Subgenus *Pererepa* Emeljanov, 2020

#### *Reptalus (Pererepa) panzeri* (Löw, 1883)

- GBIF <https://www.gbif.org/species/2059793>
- TaxonWorks <https://hoppers.speciesfile.org/otus/60461/overview>

##### Nomenclature:

*Oliarus panzeri* (Löw, 1883) in Diabola (1977).

**Distribution: Literature data:** Rethymno: Dariviana (Diabola 1977). Heraklion: Moni Preveli; Faistos (Diabola 1977). **New data:** Chania: Lefka Ori, below Pachnes peak.

**Notes:** Collected by sweep netting in July at 1792 m a.s.l.

### Subgenus *Reptalus* Emeljanov, 1971

#### *Reptalus (Reptalus) quinquecostatus* (Dufour, 1833)

- GBIF <https://www.gbif.org/species/2059789>
- TaxonWorks <https://hoppers.speciesfile.org/otus/60466/overview>

##### Nomenclature:

*Oliarus melanochaetus* Fieber, 1876 in Diabola (1977).

**Distribution: Literature data:** Chania (Diabola 1977). **New data:** Chania: Gramvousa Peninsula. Heraklion: Kofinas (sparse phrygana, sxistolithos); Koudoumaquis.

**Notes:** Collected in pitfall traps from late June to mid September and in a single trap left throughout the year at 142-813 m a.s.l. The species was recorded for a number of European countries under the name *R. melanochaetus* (Fieber, 1876). However, subsequent studies of the type materials by Webb et al. (2013) have shown that this is a junior synonym of *R. quinquecostatus*. The name *R. quinquecostatus* has been utilised for a considerable period to denote a group of cryptic species (Emeljanov 2020, Tishechkin and Emeljanov 2024).

#### *Reptalus* sp.

**Distribution: New data:** Chania: Gramvousa Peninsula. Rethymno: Moni Preveli. Heraklion: Kofinas; Koudoumas.

**Notes:** Collected from pitfall traps from April to September from 142 to 786 m a.s.l. and from a single trap left throughout the year at 813 m a.s.l.



**Family Delphacidae Leach, 1815****Subfamily Asiracinae Motschulsky, 1863****Tribe Asiracini Motschulsky, 1863****Genus *Asiraca* Latreille, 1797*****Asiraca clavicornis* (Fabricius, 1794)**

- GBIF <https://www.gbif.org/species/2054367>
- TaxonWorks <https://hoppers.speciesfile.org/otus/60903>

**Distribution: Literature data:** Rethymno: Vizari; Agia Galini; Spil; Dariviana; Anguselliana. Heraklion: Gortis; Tympaki (Asche and Remane 1982). **New data:** Heraklion: near the Almyros River.

**Notes:** Collected in a pitfall trap set in late November and collected in late May near a river at 5 m a.s.l.

**Subfamily Delphacinae Leach, 1815****Tribe Delphacini Leach, 1815****Subtribe Delphacina Leach, 1815****Genus *Chloriona* Fieber, 1866*****Chloriona unicolor* (Herrich-Schäffer, 1835)**

- GBIF <https://www.gbif.org/species/2054413>
- TaxonWorks <https://hoppers.speciesfile.org/otus/61276>

**Distribution: Literature data:** Rethymno: Agia Galini; Dariviana. Heraklion: Matala; Tympaki; Azimion (Asche 1982, Asche and Remane 1982). **New data:** Heraklion: Analipsi.

**Notes:** Collected by sweep netting on various herbaceous vegetation under olive groves in early July at 15 m a.s.l.

***Chloriona* sp.**

**Distribution: New data:** Rethymno: Lavris. Heraklion: Nea Alikarnassos.

**Notes:** Two females collected by sweep net in June by the riverside.

**Genus *Eurysa* Fieber, 1866****Subgenus *Eurysa* Fieber, 1866*****Eurysa (Eurysa) duffelsi* Drosopoulos & Asche, 1984**

- GBIF <https://www.gbif.org/species/2056911>
- TaxonWorks <https://hoppers.speciesfile.org/otus/61787>

**Distribution: Literature data:** Chania: Samaria Gorge. Rethymno: Moni Arcadio; between Perama and Heraklion (Drosopoulos and Asche 1984). **New data:** Heraklion: Kofinas.

**Notes:** In the higher parts of the Samaria Gorge on grasses under trees of the genera *Pinus* and *Abies cephalonica* (Drosopoulos and Asche 1984).

**\* *Eurysa (Eurysa) lineata* (Perris, 1857)**

- GBIF <https://www.gbif.org/species/2056935>
- TaxonWorks <https://hoppers.speciesfile.org/otus/61802>

**Distribution: New data:** Heraklion: Koudoumas.

**Notes:** New species for the fauna of Crete. The species is described from Tunisia and widespread in southern Europe and parts of the Middle East and Central Asia (Dimitriev et al. 2022). Caught in pitfall trap set in late December and collected in late January at 761 m a.s.l.

***Eurysa* sp.**

**Distribution: New data:** Heraklion: Omalos Vianou.

**Notes:** Single female specimen, collected by pitfall trap from May to July 1343 m a.s.l.



## Genus *Muirodelphax* Wagner, 1963

### \* *Muirodelphax aubei* (Perris, 1857)

- GBIF <https://www.gbif.org/species/2053946>
- TaxonWorks <https://hoppers.speciesfile.org/otus/62582>

**Distribution: New data:** Chania: Stavros; Lefka Ori on the road to Pachnes peak. Heraklion: Karteros Estuary; on the dunes of Aposelemis Beach.

**Notes:** New species for the fauna of Crete. The species is widespread in the temperate zones of the Palaearctic (Dimitriev et al. 2022). Collected in pitfall traps and by sweep netting from May to July up to 1792 m a.s.l.

## Genus *Perkinsiella* Kirkaldy, 1903

### \* *Perkinsiella* sp.

**Distribution: New data:** Chania: Falasarna wetland.

**Notes:** New genus for Crete. Single specimen collected from a pitfall trap in May at 2 m a.s.l. Identification of the species is currently impossible, as we only have one female specimen.

## Genus *Pseudaraeopus* Kirkaldy, 1904

### *Pseudaraeopus lethierryi* (Mulsant & Rey, 1879)

- GBIF <https://www.gbif.org/species/2056380>
- TaxonWorks <https://hoppers.speciesfile.org/otus/63118/overview>

**Distribution: Literature data:** Rethymno: Melambes Vill. (Asche and Remane 1982).

**New data:** Rethymno: Geropotamos Bridge.

**Notes:** Collected by sweep netting in the beginning of June at 32 m a.s.l.

## Genus *Toya* Distant, 1906

### Subgenus *Metadelphax* Wagner, 1963

#### *Toya (Metadelphax) propinqua* (Fieber, 1866)

- GBIF <https://www.gbif.org/species/9367508>
- TaxonWorks <https://hoppers.speciesfile.org/otus/62481>

**Distribution: Literature data:** Rethymno: Agia Galini; Apodoulou; Meronas. Heraklion: Psiloritis (Asche and Remane 1982). **New data:** Chania: Elafonisi; Falasarna. Heraklion: Kofinas; near the Almyros River.

**Notes:** Collected in pitfall traps from March to November up to 786 m a.s.l.

## Tribe Tropidocephalini Muir, 1915

### Genus *Tropidocephala* Stål, 1853

#### *Tropidocephala tuberipennis* (Mulsant & Rey, 1855)

- GBIF <https://www.gbif.org/species/2056170>
- TaxonWorks <https://hoppers.speciesfile.org/otus/64081>

**Distribution: Literature data:** Rethymno: Agia Galini; Psiloritis. Heraklion: Timbaki (Asche and Remane 1982). **New data:** Rethymno: Lavris.

**Notes:** Collected in early June by sweep netting on *Imperata* sp. near Geropotamos River, 5 m a.s.l.

## Subfamily Kelisiinae Wagner, 1963

### Genus *Kelisia* Fieber, 1866

#### *Kelisia cretica* Asche, 1982

- GBIF <https://www.gbif.org/species/2056817>
- TaxonWorks <https://hoppers.speciesfile.org/otus/64249>

**Distribution: Literature data:** Rethymno: Kares; Psiloritis. Heraklion: Spili Galia; Zaros (Asche 1982). **New data:** Chania: Falasarna; Agia Irini Gorge on E4 path.

**Notes:** Considered endemic to Crete. Collected from July to November in pitfall traps in a wetland and by sweep netting in early June on *Juncus* sp., in Agia Irini Gorge at 553 m a.s.l.



***Kelisia* sp.**

**Distribution: New data:** Chania: Falasarna wetland; Agia Irini george, the E4 path. Heraklion: Almyros River.

**Notes:** Collected in pitfall traps from June to November at 2 m a.s.l. and by sweep netting in June at 553 m a.s.l. Female specimens that we cannot identify by the colouration of their heads.

**Infraorder Cicadomorpha Evans, 1946****Superfamily Cicadoidea Latreille, 1802****Family Cicadidae Latreille, 1802****Genus *Cicada* Linnaeus, 1758*****Cicada cretensis* Quartau & Simões, 2005**

- GBIF <https://www.gbif.org/species/8056491>
- TaxonWorks <https://hoppers.speciesfile.org/otus/8759>

**Distribution: Literature data:** Chania: Omalos. Rethymno: Akoumia; Spili. Heraklion: Pyrgos; Tilisos. Lasithi: Ierapetra; Pilalimata; Vai (Quartau and Simões 2005). **New data:** Chania: Gavdos Isl.; Anopoli and Pachnes in Lefka Ori; archaeological site *Aptera*; Falasarna. Rethymno: Nida plateau in Psiloritis. Heraklion: Alagni; Giouchtas Mt.; Platanos; Mandres; Siva; between Peri and Platanos; Rouvas; Petrokefali; Trapsano; Moni Vrontisi; Gazi; NHMC yard; Analipsi.

**Notes:** Known only from Crete, Karpathos and Kythira islands (Simões and Quartau 2008).

**Genus *Oligoglana* Horváth, 1912*****Oligoglana carayoni* (Boulard, 1982)**

- GBIF <https://www.gbif.org/species/9612587>
- TaxonWorks <https://hoppers.speciesfile.org/otus/7215>

**Nomenclature:**

*Tettigetta carayoni* Boulard 1982 in Trilar and Gogala (2015).

**Distribution: Literature data:** Rethymno: Moni Arkadi (Trilar and Gogala 2015). **New data:** Chania: Therissos Gorge. Rethymno: Prines. Heraklion: Petrokephali; Archanes; Analipsi. Lasithi: Xirokampos.

**Notes:** Considered endemic to Crete. Collected in pitfall traps from April to August and by sweep netting in July up to 435 m a.s.l.

## Genus *Pagiphora* Horvath, 1912

### *Pagiphora aschei* Kartal, 1978

- GBIF <https://www.gbif.org/species/4482657>
- TaxonWorks <https://hoppers.speciesfile.org/otus/8005>

**Distribution: Literature data:** Chania: Gramvousa Peninsula; Balos; Kissamos. Rethymno: Agia Galini; Adele; Armeni; Platanias; Spili. Heraklion: Ammoudara Beach; Knossos. Lasithi: Agios Nikolaos; Neapoli (Trilar and Gogala 2012). **New data** : Heraklion: Petrokefali.

**Notes:** Collected in pitfall traps are from May to July at 45 m a.s.l.

## Superfamily Cercopoidea Leach, 1815

### Family Aphrophoridae Amyot & Audinet-Serville, 1843

### Genus *Lepyronia* Amyot & Serville, 1843

#### \* *Lepyronia coleoptrata* (Linnaeus, 1758)

- GBIF <https://www.gbif.org/species/2015789>
- TaxonWorks <https://hoppers.speciesfile.org/otus/1044335>

**Distribution: New data:** Heraklion: along the Almyros River.

**Notes:** New genus and species for the fauna of the Island of Crete. The species is widespread in the temperate zones of the Palaearctic (Dimitriev et al. 2022). Collected in pitfall traps from May to August at 5-20 m a.s.l.



## Genus *Neophilaenus* Haupt, 1935

### Subgenus *Neophilaenus* Emeljanov, 1964

#### *Neophilaenus (Neophilaenus) campestris* (Fallén, 1805)

- GBIF <https://www.gbif.org/species/4482781>
- TaxonWorks <https://hoppers.speciesfile.org/otus/1660>

**Distribution: Literature data:** Chania (Koufakis et al. 2024). **New data:** Heraklion: Almyros River Park; Giouchtas Mt.; Chania: Gavdos Isl.

**Notes:** Collected in pitfall traps from March to July and by sweep netting in May on various herbaceous vegetation at 30-1193 m a.s.l.

## Genus *Philaenus* Stål, 1864

### *Philaenus signatus* Melichar, 1896

- GBIF <https://www.gbif.org/species/2016065>
- TaxonWorks <https://hoppers.speciesfile.org/otus/1800>

**Distribution: Literature data:** Chania: no specific location. Heraklion: no specific location (Drosopoulos and Asche 2000). **New data:** Chania: Gramvousa Peninsula. Rethymno: Exantis; Moni Preveli. Heraklion: Almyros River Park; Giouchtas Mt.; Mohos surrounding.

**Notes:** Colour polymorphism is observed. In Greece, it usually lives in the same habitat as *Philaenus spumarius*, more often near the sea, but there are also single finds from the mountains (Drosopoulos and Asche 2000). Caught in pitfall traps left throughout the year and by sweep netting - in May and July on various herbaceous plants up to 800 m a.s.l.

### *Philaenus spumarius* (Linnaeus, 1758)

- GBIF <https://www.gbif.org/species/2016038>
- TaxonWorks <https://hoppers.speciesfile.org/otus/1804>

**Distribution: Literature data:** no specific locality (Nast 1972) Chania: Chaleppa; Governeto (Haupt 1928); Chania (Tsagkarakis et al. 2018); Heraklion: no specific location (Drosopoulos and Asche 2000). **New data:** Chania: Kournas lake. Rethymno: Prines; Preveli. Heraklion: Park on the Almyros River; Analipsi along the Aposelemi River; Mochos surrounding, Omalos Plateau. Lassithi: Lassithi Plateau; Selakano.

**Notes:** Colour polymorphism is observed. Caught in pitfall traps left throughout the year and through sweep netting - in May and July on various herbaceous plants up to 1334 m a.s.l.

## Family Cercopidae Leach, 1815

### Genus *Cercopis* Fabricius, 1775

#### \* *Cercopis sanguinolenta* (Scopoli, 1763)

- GBIF <https://www.gbif.org/species/2018539>
- TaxonWorks <https://hoppers.speciesfile.org/otus/2530>

**Distribution: New data:** Heraklion: along the Almyros River.

**Notes:** New genus and new species for the fauna of Crete. The species is widespread in Europe and parts of the Middle East (Dimitriev et al. 2022). Single specimen collected in a pitfall trap set from November to May at 5 m a.s.l.

### Genus *Haematoloma* Haupt, 1919

#### \* *Haematoloma dorsatum* (Ahrens, 1812)

- GBIF <https://www.gbif.org/species/2017811>
- TaxonWorks <https://hoppers.speciesfile.org/otus/2567>

**Distribution: New data:** Heraklion: Moni Koudouma.

**Notes:** New genus and new species for the fauna of Crete. The species is widespread in the Mediterranean (Dimitriev et al. 2022). Collected in pitfall traps in April-May at 523-598 m a.s.l.

## Superfamily Membracoidea Rafinesque, 1815

### Family Cicadellidae Latreille, 1802

### Subfamily Aphrodinae Haupt, 1927

### Tribe Aphrodini Haupt, 1927 [1859]

### Genus *Anoscopus* Kirschbaum, 1858

#### *Anoscopus albifrons* (Linnaeus, 1758)

- GBIF <https://www.gbif.org/species/4484088>
- TaxonWorks <https://hoppers.speciesfile.org/otus/13604>

#### Nomenclature:

*Aphrodes albifrons* (Linnaeus, 1758) in Diabola (1977), Lymberakis (2003).

*Aphroderes albifrons* L. Haupt (1928).

**Distribution: Literature data:** no specific locations (Diabola 1977), Chania: Lefka Ori (Lymberakis 2003); Meskla (Haupt 1928). **New data:** Chania: Gramvousa Peninsula; Agia Lake; Falasarna; Elafonisi; Lefka Ori; Kournas Lake. Rethymno: Petres; Moni Preveli; Vrises; Agia Fotini; Platania. Heraklion: Aposelemis Dam; Partiron Dam; Faneromeni Dam; along the Almyros River; Siva; Rufas; Voroi; Koudouma; Kofinas; Giouchtas Mt.; Omalos plateau; Psiloritis, Vrontisi monastery; Lasithi: Dikti Mt.; Pachia Amos; Krustas; Istro; Tripti M; Agios Nikolaos; between Itanos and Vai.

**Notes:** The species has been collected in pitfall traps left throughout the year up to 1700 m above sea level.

#### \* *Anoscopus flavostriatus* (Donovan, 1799)

- GBIF <https://www.gbif.org/species/4484084>
- TaxonWorks <https://hoppers.speciesfile.org/otus/13699>

**Distribution: New data:** Chania: Lake Agia.

**Notes:** New species for the fauna of Crete. The species is widespread in Holarctic realm (Dimitriev et al. 2022). Collected in pitfall traps set during the period May – July at 44 m a.s.l. Epigeobiont.



**\*\* *Anoscopus gorloppus* Guglielmino & Bückle, 2015**

- GBIF <https://www.gbif.org/species/11174939>
- TaxonWorks <https://hoppers.speciesfile.org/otus/13709>

**Distribution: New data:** Heraklion: along the Almyros River.

**Notes:** New species for the fauna of Greece. So far, the species is known only from Italy, where it was described (Guglielmino and Bückle 2015). Single specimen, collected in a pitfall trap between June and August at 1 m a.s.l. Epigeobiont.

**\*\* *Anoscopus samuricus* (Tshmir, 1977)**

- GBIF <https://www.gbif.org/species/4484083>
- TaxonWorks <https://hoppers.speciesfile.org/otus/13720>

**Distribution: New data:** Rethymno: Moni Preveli; Psiloritis Mt. Heraklion: Kofinas; Omalos plateau.

**Notes:** New species for the fauna of Greece. The species is known from Dagestan, the north-western Caucasus, Iraq, Turkey and Spain (Guglielmino and Bückle 2015, Özgen et al. 2024). Collected in pitfall traps from March to July at 20-1334 m a.s.l.

**Genus *Aphrodes* Curtis, 1831*****Aphrodes bicincta* (Schränk, 1776)**

- GBIF <https://www.gbif.org/species/4484106>
- TaxonWorks <https://hoppers.speciesfile.org/otus/13756>

**Distribution: Literature data:** no specific locality (Nast 1972). Chania: no specific location (Abdollahi et al. 2015, Tsagkarakis et al. 2018); Lefka Ori (Lymberakis 2003); Kydonia (Haupt 1928). **New data:** Chania: Troharis peak in Lefka Ori; Lake Kournas. Rethymno: Sakturia; Psiloritis. Heraklion: Kofinas.

**Notes:** Collected in traps from April to September up to 2347 m a.s.l.

**\*\* *Aphrodes diminuta* Ribaut, 1952**

- GBIF <https://www.gbif.org/species/7508026>
- TaxonWorks <https://hoppers.speciesfile.org/otus/13841>

**Distribution: New data:** Chania: Troharis peak in Lefka Ori.

**Notes:** New species for the fauna of Greece. The species is widespread in the temperate Palaearctic realm (Dimitriev et al. 2022). Two specimens from pitfall traps in September under Troharis peak at 2347 m a.s.l.

### ***Aphrodes makarovi* Zachvatkin, 1948**

- GBIF <https://www.gbif.org/species/4484105>
- TaxonWorks <https://hoppers.speciesfile.org/otus/13847>

**Distribution: Literature data:** Chania: no specific location (Antonatos et al. 2020).

**New data:** Chania: Troharris peak and on the road to Pachnes peak in Lefka Ori.

Rethymno: Moni Preveli.

**Notes:** Collected in pitfall traps from March to October up to 2347 m a.s.l.

### ***Aphrodes* sp.**

**Distribution: New data:** Chania: Anopoli, phrygana plateau; Therisso to Kaloros Mt.

Rethymno: Moni Preveli ; Agios Mamas; Tigania. Heraklion: Kofinas; Achentrias; Mikri Episkopi.

**Notes:** Nine females collected in pitfall traps left throughout the year up to 1780 m a.s.l.

## **Subfamily Deltocephalinae Fieber, 1869**

### **Tribe Athysanini Van Duzee, 1892**

### **Genus *Allygidius* Ribaut, 1948**

### ***Allygidius* sp.**

**Distribution: New data:** Heraklion: Almyros River; Kommos sand dunes.

**Notes:** Five females, collected in pitfall traps from November to May.

### **Genus *Allygus* Fieber, 1872**

### **\* *Allygus modestus* Scott, 1876**

- GBIF <https://www.gbif.org/species/2029993>
- TaxonWorks <https://hoppers.speciesfile.org/otus/20431>

**Distribution: New data:** Heraklion: Giouchtas Mt.

**Notes:** New species for the fauna of the Crete. The species is known from Europe and North Africa, but is registered as non-indigenous in North America (Hamilton 1983, Dimitriev et al. 2022). Collected in May by sweep netting at 700 m a.s.l. on shrubby vegetation.

***Allygus* sp.**

**Distribution: New data:** Heraklion: Almyros River; Livadopa pilot orchard, Siva.

**Notes:** Two females collected in pitfall traps in May.

**Genus *Conosanus* Osborn & Ball, 1902*****Conosanus obsoletus* (Kirschbaum, 1858)**

- GBIF <https://www.gbif.org/species/2045459>
- TaxonWorks <https://hoppers.speciesfile.org/otus/20883>

**Distribution: Literature data:** Chania: Chania (Tsagkarakis et al. 2018). **New data:** Heraklion: along the Aposelemis River.

**Notes:** Collected in pitfall traps from May to August up to 5 m a.s.l.

**Genus *Euscelidius* Ribaut, 1942*****Euscelidius variegatus* (Kirschbaum, 1858)**

- GBIF <https://www.gbif.org/species/2026086>
- TaxonWorks <https://hoppers.speciesfile.org/otus/21028>

**Distribution: Literature data:** Chania: Zimbragos; Nerokouros; Pyrgos; Louzaki; Zonaki; Souda. Rethymno: Episkopi. Heraklion: Fodele (Koufakis et al. 2022). **New data:** Heraklion: along the Aposelemis River.

**Notes:** Collected in pitfall traps from May to August up to 20 m a.s.l.

**Genus *Euscelis* Brullé, 1832****\* *Euscelis incisa* (Kirschbaum, 1858)**

- GBIF <https://www.gbif.org/species/8929628>
- TaxonWorks <https://hoppers.speciesfile.org/otus/21077>

**Distribution: New data:** Heraklion: along the Aposelemis River; Karteros; Kamilari; Platanos.

**Notes:** New species for the fauna of Crete. Widespread Palaearctic species (Dimitriev et al. 2022). Collected in pitfall traps from May to August up to 93 m a.s.l. and by sweep netting in June on dry grasses near the sea coast.



### ***Euscelis ohausi* Wagner, 1939**

- GBIF <https://www.gbif.org/species/5154903>
- TaxonWorks <https://hoppers.speciesfile.org/otus/21104>

**Distribution: Literature data:** Chania: Zimbragos; Nerokouros; Pyrgos; Louzaki; Zunaki; Souda. Rethymno: Episkopi. Heraklion: Fodele; Agia Varvara (Koufakis et al. 2022). **New data:** Rethymno: Moni Preveli; Rizikas. Heraklion: Siva; Mikri; Episkopi; Feneromeni; near the Almyros River; Temenos; Agios Spyridon; Peri; Platanos; Amoudara. Lasithi: Mochlos.

**Notes:** Collected in pitfall traps set from April to December up to 315 m a.s.l.

### **Subgenus *Euscelis* Brullé, 1832**

#### ***Euscelis (Euscelis) lineolata* Brullé, 1832**

- GBIF <https://www.gbif.org/species/5154915>
- TaxonWorks <https://hoppers.speciesfile.org/otus/21052>

**Distribution: Literature data:** Chania: no specific location (Tsagkarakis et al. 2018, Antonatos et al. 2020). **New data:** Rethymno: Ano Meros; Psiloritis. Heraklion: Siva, Kofinas. Lassithi: Bramiana Dam.

**Notes:** Collected in pitfall traps left throughout the year up to 729 m a.s.l.

#### ***Euscelis* sp.**

**Distribution: New data:** Chania: Agia Lake; Kouroupitos. Heraklion: Anapodaris; Koudoumas; Sternes; Almyros River; Voroi

**Notes:** Nine females collected by pitfall traps left throughout the year round up to 607 m a.s.l.

### **Genus *Melillaia* Linnavuori, 1971**

#### ***Melillaia desbrochersi* (Lethierry, 1889)**

- GBIF <https://www.gbif.org/species/2033546>
- TaxonWorks <https://hoppers.speciesfile.org/otus/21531>

##### **Nomenclature:**

*Melillaia matsumuri* (Metcalf, 1955) in Nast (1972).

**Distribution: Literature data:** no specific location (Nast 1972, de Jong et al. 2014).

**New data:** Chania: Gramvousa Peninsula; Elafonisi; Gavdos Isl. Rethymno: Moni

Preveli; Amari Dam. Heraklion: Giouchtas Mt.; Koudoumas; Pigidakia; Aposelemys wetland. Lassithi: Mochlos; Topleni monastery.

**Notes:** Collected in pitfall traps left throughout the year up to 770 m a.s.l. and by sweep netting only in May.

## Genus *Platymetopius* Burmeister, 1838

### *Platymetopius* sp.

**Distribution: New data:** Heraklion: Giouchtas Mt.

**Notes:** Single nymph collected by sweep net in May at 800 m a.s.l.

## Genus *Thamnotettix* Zetterstedt, 1837

### \* *Thamnotettix zelleri* (Kirschbaum, 1868)

- GBIF <https://www.gbif.org/species/2026125>
- TaxonWorks <https://hoppers.speciesfile.org/otus/22289>

**Distribution: New data:** Rethymno: Prines. Heraklion: Siva; Petrokephali.

**Notes:** New species for the fauna of Crete. Widespread Mediterranean species (Dimitriev et al. 2022). Collected in pitfall traps from April to May at 41-196 m a.s.l.

### *Thamnotettix minoidis* Dlabola, 1974

- GBIF <https://www.gbif.org/species/4483120>
- TaxonWorks <https://hoppers.speciesfile.org/otus/22249>

**Distribution: Literature data:** Lasithi: Neapolis (Dlabola 1974a). **New data:** Rethymno: Psiloritis. Heraklion: Giouchtas Mt.; Kofinas.

**Notes:** Considered endemic to Crete. Collected in pitfall traps from February to August up to 1100 m a.s.l.

## Tribe Chiasmini Distant, 1908

### Genus *Aconura* Lethierry, 1876

#### Subgenus *Aconura* Lethierry, 1876

#### **\*\* *Aconura (Aconura) jakowlefi* Lethierry, 1876**

- GBIF <https://www.gbif.org/species/2036594>
- TaxonWorks <https://hoppers.speciesfile.org/otus/22824>

**Distribution:** **New data:** Chania: Gavdos Isl.

**Notes:** New species for the fauna of Greece. So far, it has been found in areas around the Black Sea, the Caspian Sea and Central Asia (Dimitriev et al. 2022). Caught in pitfall traps left throughout the year – from November to March and from June to August at 30 m a.s.l. One of the southernmost parts of Gavdos Island, which is also the southernmost part of Greece.

### Genus *Chiasmus* Muslant & Rey, 1855

#### **\* *Chiasmus conspurcatus* (Perris, 1857)**

- GBIF <https://www.gbif.org/species/5155552>
- TaxonWorks <https://hoppers.speciesfile.org/otus/23088>

**Distribution:** Chania: Gavdos Isl.

**Notes:** New genus and species for the fauna of Crete. Widespread in Europe, the Mediterranean and Central Asia (Dimitriev et al. 2022). Collected in pitfall traps from June to August at 259 m a.s.l. on the north-western side of Gavdos Isl.

### Genus *Exitianus* Ball, 1929

#### ***Exitianus africanus* (Walker, 1851)**

- GBIF <https://www.gbif.org/species/2048928>
- TaxonWorks <https://hoppers.speciesfile.org/otus/23200>

#### **Nomenclature:**

*Exitianus capicola* (Stål, 1855) in Dlabola (1977), Tsagkarakis et al. (2018), Antonatos et al. (2020).



**Distribution: Literature data:** Chania: Near the Kiliaris River. Heraklion: Platanos; Faistos; Almyros (Diabola 1977, Tsagkarakis et al. 2018, Antonatos et al. 2020). **New data:** Heraklion: Platanos; near the Almyros River.

**Notes:** Collected in pitfall traps from June to September up to 93 m a.s.l.

## Tribe Cicadulini Van Duzee, 1892

## Genus *Cicadula* Zetterstedt, 1837

### *Cicadula* sp.

**Distribution: New data:** Chania: Gramvousa Peninsula. Heraklion: Moires.

**Notes:** Single female specimen collected in a pitfall trap from April to late June at 419 m a.s.l. and, by sweep netting, another single female specimen in late July at 77 m a.s.l.

## Genus *Eohardya* Zakhvatkin, 1946

### *Eohardya* cf. *fraudulenta* (Horváth, 1903)

- GBIF <https://www.gbif.org/species/4483125>
- TaxonWorks <https://hoppers.speciesfile.org/otus/21333/overview>

**Distribution: Literature data:** no specific locality (Diabola 1994). **New data:** Chania: Pachnes peak in Lefka Ori Mt. Heraklion: Moires; Omalos Vianou in Dikti Mt.; Kofinas; Koudoumas; Sternes.

**Notes:** Collected in pitfall traps from May to December at 523-2453 m a.s.l. and by sweep netting at the end of July at 77 m a.s.l.

## Genus *Mocydiopsis* Ribaut, 1939

### *Mocydiopsis* sp.

**Distribution: New data:** Rethymno: Afentis Christos. Heraklion: Koudouma; Kofinas.

**Notes:** New genus for the fauna of Crete. Collected in pitfall traps from June to August up to 729 m a.s.l.

## Genus *Proceps* Mulsant & Rey, 1855

### \* *Proceps acicularis* Mulsant & Rey, 1856

- GBIF <https://www.gbif.org/species/2044330>
- TaxonWorks <https://hoppers.speciesfile.org/otus/23602>

**Distribution: New data:** Rethymno: Moni Preveli. Heraklion: Siva; Kofinas.

**Notes:** New genus and new species for the fauna of Crete. The species is widespread in Europe and Central Asia (Dimitriev et al. 2022). Found in pitfall traps left throughout the year, placed at altitudes from 91 to 175 m a.s.l.

## Tribe Deltocephalini Fieber, 1869

### Genus *Maiestas* Distant, 1917

#### *Maiestas schmidtgeni* (Wagner, 1939)

- GBIF <https://www.gbif.org/species/7677719>
- TaxonWorks <https://hoppers.speciesfile.org/otus/24451>

**Distribution: Literature data:** Chania: Kyriaris River. Heraklion: Faistos (Dlabola 1977, Tsagkarakis et al. 2018). **New data:** Rethymno: Lavris. Heraklion: near Aposelemis River.

**Notes:** Collected in pitfall traps from April to August and by sweep netting in June. In wetlands and lower riverbeds at low altitudes (up to 4 m).

## Tribe Fieberiellini Wagner, 1951

### Genus *Fieberiella* Signoret, 1880

#### *Fieberiella kritiella* Dlabola, 1989

- GBIF <https://www.gbif.org/species/2043589>
- TaxonWorks <https://hoppers.speciesfile.org/otus/25363>

**Distribution: Literature data:** Chania: Lake Kournas (Dlabola 1989). **New data:** Chania: Lefka Ori - Troharis peak. Rethymno: Moni Preveli; Psiloritis. Heraklion: Kofinas.

**Notes:** Considered endemic to Crete. Collected in pitfall traps from March to October from 167 to 2347 m a.s.l.

***Fieberiella* sp.**

**Distribution: New data:** Heraklion: NHMC yard.

**Notes:** Single female specimen collected by sweep net in July at 116 m a.s.l.

**Genus *Synophropsis* Haupt, 1926*****Synophropsis lauri* (Horváth, 1897)**

- GBIF <https://www.gbif.org/species/2046028>
- TaxonWorks <https://hoppers.speciesfile.org/otus/25405>

**Distribution: Literature data:** Chania no specific locality. Rethymno: Moni Preveli. Lassithi: Agios Ioannis (Diabola 1977, Tsagkarakis et al. 2018, Antonatos et al. 2020).  
**New data:** Heraklion: Roufas. Lassithi: Istro, Xerokampos.

**Notes:** Collected in pitfall traps from May to August up to 299 m a.s.l.

**Tribe Goniagnathini Wagner, 1951****Genus *Epistagma* Emeljanov, 1999****Subgenus *Epistagma* Emeljanov, 1999****\* *Epistagma (Epistagma) guttulinervis* (Kirschbaum, 1868)**

- GBIF <https://www.gbif.org/species/12210758>
- TaxonWorks <https://hoppers.speciesfile.org/otus/25415>

**Distribution: New data:** Chania: Lefka Ori, on the way to Pachnes peak. Heraklion: Feneromeni; along the River Almyros; Temenos; Archanes; Siva; Petrokefali; between Peri and Platanos; Ammoudara. Lasithi: between Itanos and Vai; Bramiana Dam.

**Notes:** New genus and species for the fauna of Crete. Widespread Palaearctic species (Dimitriev et al. 2022). Collected in pitfall traps left throughout the year, by sweep netting – from June to August up to 1792 m a.s.l.



## Genus *Goniagnathus* Fieber, 1866

### Subgenus *Goniozygotes* Emeljanov, 1999

#### *Goniagnathus (Goniozygotes) bolivari* (Melichar, 1907)

- GBIF <https://www.gbif.org/species/2042832>
- TaxonWorks <https://hoppers.speciesfile.org/otus/25446>

**Distribution: Literature data:** Chania: Lefka Ori (Lymberakis 2003). **New data:** Chania: Elaфонisi; Lefka Ori - Troharis peak; between Therisso and Kaloros; on the way to Pachnes peak; Kouroupitos. Rethymno: Moni Preveli; Exantis; Afentis Christos; Rizikas; Psiloritis; Lohrias; Idaion. Heraklion: Sternes; Koudoumas; Kofinas.

**Notes:** Collected in pitfall traps left throughout the year up to 2347 m a.s.l.

#### *Goniagnathus* sp.

**Distribution: New data:** Heraklion: Giouchta Mt.; Gazi; Malia.

**Notes:** Four nymphs collected by sweep net in May and June up to 700 m a.s.l.

## Tribe Koebeliini Baker, 1897

### Subtribe Grypotina Haupt, 1929

#### Genus *Grypotellus* Emeljanov, 1999

#### \* *Grypotellus staurus* (Ivanoff, 1885)

- GBIF <https://www.gbif.org/species/2041529>
- TaxonWorks <https://hoppers.speciesfile.org/otus/25904>

**Distribution: New data:** Heraklion: Rufas; Koudoumas.

**Notes:** New species for the fauna of Crete. Widespread Mediterranean species (Dimitriev et al. 2022). Collected in pitfall traps from July to September at 299 – 814 m a.s.l.

**Tribe Limotettigini Baker, 1915****Genus *Limotettix* Sahlberg, 1871****Subgenus *Limotettix* Sahlberg, 1871****\* *Limotettix (Limotettix) striola* (Fallén, 1806)**

- GBIF <https://www.gbif.org/species/2043723>
- TaxonWorks <https://hoppers.speciesfile.org/otus/651972>

**Distribution: New data:** Heraklion: on the road between Peri and Platanos.

**Notes:** New species for the fauna of Crete. Widespread Holarctic species (Dimitriev et al. 2022). Collected in single pitfall trap in July at 93 m a.s.l.

**Tribe Macrostelini Kirkaldy, 1906****Genus *Balclutha* Kirkaldy, 1900*****Balclutha* cf. *frontalis* (Ferrari, 1882)**

- GBIF <https://www.gbif.org/species/4482994>
- TaxonWorks <https://hoppers.speciesfile.org/otus/26232/overview>

**Distribution: Literature data:** Chania: no specific location (Koufakis et al. 2024); Platanos (Diabola 1977). **New data:** Chania: Kedrodasos Beach. Rethymno: Geropotamos bridge. Heraklion: Analipsi; Gazi; between Stalida and Mochlos.

**Notes:** Collected by sweep netting from May to July up to 419 m a.s.l.

***Balclutha* sp.**

**Distribution: New data:** Chania: Stavres, near Zorba Beach. Rethymno: Lavis, after Geropotamos bridge. Heraklion: Gazi; Malia, the path from Stalida to Mochos; Rema Gazanos River.

**Notes:** Collected by sweep netting from May to July from 3 to 419 m a.s.l.

## Tribe Opsiini Emeljanov, 1962

### Subtribe Circuliferina Emeljanov, 1962

### Genus *Neoaliturus* Distant, 1918

### Subgenus *Neoaliturus* Distant, 1918

#### *Neoaliturus* cf. *fenestratus* (Herrich-Schäffer, 1834)

- GBIF <https://www.gbif.org/species/2048889>
- TaxonWorks <https://hoppers.speciesfile.org/otus/27135>

**Distribution: Literature data:** Chania: Lefka Ori (Lymberakis 2003). **New data:** Chania: Gramvousa Peninsula; Lefka Ori. Heraklion: River Park Almyros; Sternes; Koudoumas; Kofinas.

**Notes:** Collected in pitfall traps left throughout the year up to 2000 m a.s.l. and by sweep netting in May.

### Subgenus *Circulifer* Zakhvatkin, 1935

#### *Neoaliturus* (*Circulifer*) cf. *haematoceps* (Mulsant & Rey, 1855)

- GBIF <https://www.gbif.org/species/2048874>
- TaxonWorks <https://hoppers.speciesfile.org/otus/27090>

**Distribution: Literature data:** no specific location (Diabola 1977). **New data:** Chania: Elaфонisi; Gavdos Isl. Heraklion: Mires; Koudoumas; Kofinas.

**Notes:** Collected in pitfall traps from March to November up to 639 m a.s.l. and by sweep netting in July.

### Subgenus *Alituriscus* Emeljanov, 1999

#### *Neoaliturus* (*Alituriscus*) sp.

**Distribution: New data:** Chania: Askyfou. Rethymno: Exantis, Agios Kyprianos Church; Lochria. Heraklion: Koudoumas; Kofinas; Sternes; Almyros River; Panagia Almyri; Voro

**Notes:** Collected from pitfall traps from May to November at 179-1914 m a.s.l.



## Subtribe Opsiina Emeljanov, 1962

### Genus *Opsius* Fieber, 1866

#### *Opsius stactogalus* Fieber, 1866

- GBIF <https://www.gbif.org/species/2038171>
- TaxonWorks <https://hoppers.speciesfile.org/otus/27462>

**Distribution: Literature data:** no specific location (de Jong et al. 2014). **New data:** Chania: Lefka Ori; on the road to Pachnes peak. Rethymno: Lavris. Heraklion: In wetland; along the Almyros River; Koudoumas; Komos sand dunes; Karteros Estuary; along the Karteros River; above Mohos.

**Notes:** Collected in pitfall traps from May to December up to 597 m a.s.l. and by sweep netting in June and July up to 1792 m a.s.l.

## Tribe Paralimnini Distant, 1908

### Subtribe Paralimnina Distant, 1908

#### Genus *Psammotettix* Haupt, 1929

#### *Psammotettix alienus* (Dahlbom, 1850)

- GBIF <https://www.gbif.org/species/4483529>
- TaxonWorks <https://hoppers.speciesfile.org/otus/28955>

**Distribution: Literature data:** no specific location (Antonatos et al. 2020). **New data:** Heraklion: Koudoumas.

**Notes:** Collected in pitfall traps from March-April at 178 m a.s.l.

#### *Psammotettix* sp.

**Distribution: New data:** Chania: Stavros, near Zorba Beach. Rethymno: Moni Preveli; Psiloritis Mt.. Heraklion: Almyros River; Kofinas; Koudoumas; Omalos Vianou plateau; Roufas, Sternes; Gounes, Karteros; Lavris, Malia, Mires. Lasithi: Xerokampos wetland; Dikti Mt., Katharon.

**Notes:** Collected in pitfall traps and sweep net from May-October up to 1334 m a.s.l.

## Tribe Phlepsiini Zahniser & Dietrich, 2013

### Genus *Phlepsius* Fieber, 1866

#### \* *Phlepsius ornatus* (Perris, 1857)

- GBIF <https://www.gbif.org/species/2026452>
- TaxonWorks <https://hoppers.speciesfile.org/otus/29963>

**Distribution: New data:** Heraklion: Koudoumas; Sivas; Komos sand dunes.

**Notes:** New species for the fauna of Crete. The species is widespread in Mediterranean and Central Asia (Dimitriev et al. 2022). Collected in pitfall traps from May to December up to 175 m a.s.l.

#### *Phlepsius* sp.

**Distribution: New data:** Heraklion: Koudouma.

**Notes:** Single specimen collected from a pitfall trap in July at 175 m a.s.l.

## Tribe Scaphoideini Oman, 1943

### Genus *Anoplotettix* Ribaut, 1942

#### *Anoplotettix* sp.

**Distribution: New data:** Rethymno: Petres wetland.

**Notes:** New genus for the fauna of Crete. Single female specimen, collected in a pitfall trap set from May to July.

## Tribe Selenocephalini Fieber, 1872

### Subtribe Selenocephalina Fieber, 1872

### Genus *Selenocephalus* Germar, 1833

#### \*\* *Selenocephalus* cf. *conspersus* (Herrich-Schäffer, 1834)

- GBIF <https://www.gbif.org/species/2030181>
- TaxonWorks <https://hoppers.speciesfile.org/otus/31449/overview>

**Distribution: New data:** Chania: Gramvousa Peninsula. Heraklion: Koudoumas

**Notes:** New species for Greece. European species (Dimitriev et al. 2022). Collected in pitfall traps from April to July from 419 to 812 m a.s.l.

**\*\* *Selenocephalus cf. deserticola* Linnavuori, 1962**

- GBIF <https://www.gbif.org/species/2030208>
- TaxonWorks <https://hoppers.speciesfile.org/otus/31455/overview>

**Distribution: New data:** Lasithi: Xerokampos.

**Notes:** New species for Greece. The species is described from Israel and, apart from its type locality, has only been found in Egypt (Diabola 1974b). Single specimen collected in pitfall trap from the end of May till the beginning of August at 2 m a.s.l.

**\* *Selenocephalus obsoletus* (Germar, 1817)**

- GBIF <https://www.gbif.org/species/4483172>
- TaxonWorks <https://hoppers.speciesfile.org/otus/31475>

**Distribution: New data:** Chania: Gavdos isl. Rethymno: Exantis. Heraklion: Koudoumas.

**Notes:** New species for the fauna of Crete. The species is widespread in the Western Palaearctic (Dimitriev et al. 2022). Collected in pitfall traps from April to August from 8 to 523 m a.s.l.

**\* *Selenocephalus pallidus* Kirschbaum, 1868**

- GBIF <https://www.gbif.org/species/2030187>
- TaxonWorks <https://hoppers.speciesfile.org/otus/31485>

**Distribution: New data:** Chania: Gavdos Isl. Rethymno: Kouroutes. Heraklion: Koudoumas; Kofinas. Lasithi: Mochlos.

**Notes:** New species for the fauna of Crete. The species is distributed in southern Mediterranean (Dimitriev et al. 2022). Collected in pitfall traps from March to September up to 729 m a.s.l. and by sweep netting in July.

**\* *Selenocephalus stenopterus* Signoret, 1880**

- GBIF <https://www.gbif.org/species/2030197>
- TaxonWorks <https://hoppers.speciesfile.org/otus/31488/overview>

**Distribution: New data:** Heraklion: Koudoumas, Kofinas.

**Notes:** New species for the fauna of Crete. The species is known from Italy, north-eastern Mediterranean, Crimea and Central European Russia (Dimitriev et al. 2022). Caught in pitfall traps from June to August from 523-812 m a.s.l.



### ***Selenocephalus* sp.**

**Distribution: New data:** Chania: Kouroupitos; Gavdos Isl.; Lefka Ori, Trocharis peak; Gramvousa Peninsula. Rethymno: Rizikas. Heraklion: Almyros River; Livadopa; Giouchtas Mt.; Koudoumas. Lasithi: Ierapetras, Archaies dexamenes Ierapetras; Istro.

**Notes:** Collected in pitfall traps from January to October at 2 - 1900 m a.s.l.

### **Subfamily Deltocephalinae undet.**

**Notes:** There were 12 males, 72 females (six of which were Athysanini) and 12 nymphs (six of which were Fieberiellini and four of which were Goniagnathini) from various locations on the Island.

### **Subfamily Dorycephalinae Oman, 1943**

#### **Tribe Eupellicini Sahlberg, 1871**

#### **Subtribe Eupelicina Sahlberg, 1871**

#### **Genus *Eupelix* Germar, 1821**

#### **\* *Eupelix cuspidata* (Fabricius, 1775)**

- GBIF <https://www.gbif.org/species/2028442>
- TaxonWorks <https://hoppers.speciesfile.org/otus/25152>

**Distribution: New data:** Chania: Gavdos Isl.; Elafonisi. Rethymno: Exantis. Heraklion: Koudoumas.

**Notes:** New record for the fauna of Crete. Widespread Palearctic species (Dimitriev et al. 2022). Collected in soil traps left throughout the year up to 1334 m a.s.l.

## Subfamily Eurymelinae Amyot & Audinet-Serville, 1843

### Tribe Idiocerini Baker, 1915

### Subtribe Idiocerina Baker, 1915

### Genus *Acericerus* Dlabola, 1974

#### \* *Acericerus vittifrons* (Kirschbaum, 1868)

- GBIF <https://www.gbif.org/species/4484047>
- TaxonWorks <https://hoppers.speciesfile.org/otus/32374>

**Distribution: New data:** Chania: Troharis peak, Lefka Ori. Rethymno: Psiloritis above Anogia on the E4 path; Heraklion: Omalos plateau.

**Notes:** New genus and species for the fauna of Crete. The species is widespread in Europe (Dimitriev et al. 2022). Collected in pitfall traps set from January to March and a single collection from September to 2347 m a.s.l. and by sweep netting in the second half of August on *Acer sempervirens* at about 1100 m above sea level.

#### *Acericerus* sp.

**Distribution: New data:** Rethymno: Psiloritis Mt.

**Notes:** Two nymphs collected by sweep netting in August.

### Genus *Bugraia* Koçak, 1981

#### *Bugraia* sp.

**Distribution: New data:** Chania: Gavdos, Gavdopoula Isl.; Gavdos Isl., Kedres wetland; Lefka Ori Mt. Trocharis peak; Falasarna wetland; Stavros, near Zorba Beach.

**Notes:** New genus for the fauna of Crete. Seven females collected in pitfall traps from March to June and by sweep net from June to September up to 1900 m a.s.l.

## Tribe Macropsini Evans, 1936

### Genus *Macropsis* Lewis, 1834

#### Subgenus *Macropsis* Lewis, 1834

#### **\*\* *Macropsis (Macropsis) brabantica* Wagner, 1964**

- GBIF <https://www.gbif.org/species/2039839>
- TaxonWorks <https://hoppers.speciesfile.org/otus/33545>

**Distribution: New data:** Heraklion: Kofinas, Sternes.

**Notes:** New species for the fauna of Greece. A rare species with unclear distribution. So far, it has been found in the Netherlands, Germany and European Russia (Dimitriev et al. 2022). Collected in pitfall traps from July to September up to 786 m a.s.l.

#### **\*\* *Macropsis (Macropsis) fuscula* (Zetterstedt, 1828)**

- GBIF <https://www.gbif.org/species/4483855>
- TaxonWorks <https://hoppers.speciesfile.org/otus/33599>

**Distribution: New data:** Heraklion: Kofinas.

**Notes:** New species for the fauna of Greece. Palaearctic species registered as non-indigenous in North America (Hamilton 1983, Dimitriev et al. 2022). Collected from pitfall traps in July at 638 m a.s.l.

#### ***Macropsis (Macropsis) heracleionica* Dlabola, 1967**

- GBIF <https://www.gbif.org/species/2039857>
- TaxonWorks <https://hoppers.speciesfile.org/otus/33626>

**Distribution: Literature data:** no specific locality (Nast 1972) Rethymno: Amari; Psiloritis (Dlabola 1967). **New data:** Heraklion: Kofinas.

**Notes:** Considered endemic to Crete. Collected in pitfall traps from July to September up to 786 m a.s.l.



**Subfamily Megophtalminae Kirkaldy, 1906****Tribe Agalliini Kirkaldy, 1901****Subtribe Agalliina Kirkaldy, 1901****Genus *Agallia* Curtis, 1833****\*\* *Agallia brachyptera* (Boheman, 1847)**

- GBIF <https://www.gbif.org/species/4482818>
- TaxonWorks <https://hoppers.speciesfile.org/otus/38776/overview>

**Distribution: New data:** Chania: Kournas Lake.

**Notes:** New species for Greece and new genus for Crete. Widespread Western Palaearctic species (Dimitriev et al. 2022). Single specimen from a pitfall trap from the beginning of May and end of June at 24 m a.s.l.

***Agallia* sp.**

**Distribution: New data:** Lasithi: Xerokampos.

**Notes:** Collected in pitfall traps from late May to late November at 1-2 m a.s.l.

**Genus *Anaceratagallia* Zakhvatkin, 1946****Subgenus *Anaceratagallia* Zakhvatkin, 1946****\* *Anaceratagallia* (*Anaceratagallia*) cf. *glabra* Dmitriev, 2020**

- GBIF <https://www.gbif.org/species/10732013>
- TaxonWorks <https://hoppers.speciesfile.org/otus/615713>

**Distribution: New data:** Chania: Gramvousa Peninsula; Lefka Ori - bellow Pachnes peak; Gavdos Isl. Rethymno: Moni Preveli; Agios Titos; Kardak; Kouroutes; Amari. Heraklion: along the Almyros River; between Peri and Platanos; Siva; Rufas; Kofinas; Sternes; Koudoumas; Amoudara. Lasithi: Xirokampos; Krustas; Paheia Amos.

**Notes:** New species for the fauna of Crete. Widespread Western Palaearctic species (Dimitriev et al. 2022). It was found in pitfall traps for the periods: January – February, March – May, June – August and November – May at altitudes from 0 to 786 m above sea level.

***Anaceratagallia (Anaceratagallia) sp.***

**Distribution: New data:** Heraklion: Monofatsiou Kofinas.

**Notes:** Single male specimen collected in a pitfall trap from January to March at 717 m a.s.l.

**Tribe Megophthalmini Kirkaldy, 1906 [1859]****Genus *Megophthalmus* Curtis, 1833****\* *Megophthalmus scabripennis* Edwards, 1915**

- GBIF <https://www.gbif.org/species/2033770>
- TaxonWorks <https://hoppers.speciesfile.org/otus/39546>

**Distribution: New data:** Chania: Gavdos Isl.; Gavdopula Isl.; Gramvousa Peninsula. Rethymno: Moni Preveli; Agios Titos. Heraklion: Giouchtas Mt.; Kofinas; Sternes; Keratokampos. Lassithi: Topleni Monastery.

**Notes:** A new species for the fauna of Crete. Widespread Western Palaearctic species (Dimitriev et al. 2022). Collected in pitfall traps from March to December up to 721 m a.s.l. and by sweep netting in May at 800 m a.s.l.

**Subfamily Typhlocybinae Kirschbaum, 1868****Tribe Erythroneurini Young, 1952****Genus *Zyginidia* Haupt, 1929*****Zyginidia pullula* (Boheman, 1845)**

- GBIF <https://www.gbif.org/species/2027339>
- TaxonWorks <https://hoppers.speciesfile.org/otus/46566>

**Distribution: Literature data:** Chania: Chania (Tsagkarakis et al. 2018). **New data:** Heraklion: Mires.

**Notes:** Collected by sweep netting in late July at 77 m a.s.l. on herbaceous vegetation under olive trees in an olive grove.

## Tribe Typhlocybini Kirschbaum, 1868

### Genus *Eupteryx* Curtis, 1831

#### Subgenus *Eupteryx* Curtis, 1831

#### *Eupteryx (Eupteryx) melissae* Curtis, 1837

- GBIF <https://www.gbif.org/species/5985079>
- TaxonWorks <https://hoppers.speciesfile.org/otus/47330>

**Distribution: Literature data:** Chania: Chania (Tsagkarakis et al. 2018). Heraklion: Knossos (Dworakowska 1972). Lasithi: Myti (Diabola 1977). **New data:** Chania: Agia Irini gorge, on E4 path.

**Notes:** Collected by sweep netting in herbaceous vegetation in early June in the upper part of the Agia Irini gorge at 553 m a.s.l.

#### *Eupteryx (Eupteryx) zelleri* (Kirschbaum, 1868)

- GBIF <https://www.gbif.org/species/5984890>
- TaxonWorks <https://hoppers.speciesfile.org/otus/47444>

**Distribution: Literature data:** Chania: no specific location. Heraklion: Knossos (Dworakowska 1972). **New data:** Heraklion: along the Almyros River; Almyros River Park.

**Notes:** Collected from May to July by sweep netting on *Origanum* sp. up to 327 m a.s.l.

#### *Eupteryx* sp.

**Distribution: New data:** Heraklion: Almyros River.

**Notes:** Two male and two female specimens, collected in pitfall traps from May to October.



## Genus *Eurhadina* Haupt, 1929

### Subgenus *Eurhadina* Haupt, 1929

#### **\*\* *Eurhadina (Eurhadina) saageri* Wagner, 1937**

- GBIF <https://www.gbif.org/species/2049147>
- TaxonWorks <https://hoppers.speciesfile.org/otus/47524>

**Distribution: New data:** Rethymno: Psiloritis, above Anogia on E4 path.

**Notes:** New species for Greece and new genus for Crete. Collected by sweep netting in late August at 1100 m a.s.l. on trees of the genus *Quercus*.

## Discussion

From the deposited collection in the Natural History Museum of Crete, 93 species of the suborder Auchenorrhyncha (Insecta, Hemiptera) from the Island of Crete were prepared and identified, belonging to 11 families. They represent 52.5% of the species known for Crete. This shows that, despite the unsuitable main collection method for the group (soil traps) and the short collection period using the most effective method (mowing with an entomological bag), the richness of the collection is relatively high. In addition, pitfall traps are not a suitable method for the group, but nevertheless, we were surprised by the diversity of species that have accidentally fallen into the traps - a good quantity of epigeobionts like the species of genus *Anoscopus* and *Aphrodes*. Of the identified species, 37 are new to the Island of Crete and 10 are new to Greece and 13 new genera to Crete. Approximately 14% of the identified species are endemic, which is indicative of the high percentage of endemism on the Island and its great conservation value. Nine of these species are endemic to Crete, while four are endemic to Greece. It is important to note that the collection is devoid of non-indigenous species, a fact that gives rise to a number of questions that require further research.

According to the available data, the distribution of species by family is not uniform in the two infraorders of Auchenorrhyncha. In the Cicadomorpha infraorder, the Cicadellidae family dominates in terms of species number – 101, as expected given that it is the most species-rich family in the group. The Cicadidae family is represented by three species, the Aphrophoridae family by five and the Cercopidae family by only three, making a total of 112 species in Cicadomorpha. In the infraorder Fulgoromorpha, the most species-rich family is Delphacidae, as expected given that it is also the largest family in this group. In Crete, the Delphacidae family numbers 32 species, followed by the Issidae family with 14 species. Third place goes to the Cixiidae family with 11 species. The Achilidae family is represented by four species, the Tettigometridae family by two and the Meenoplidae and Ricaniidae families by one each, making a total of 65 species in Fulgoromorpha. In terms of distribution, the situation is similar for most families to that in Europe as a whole. However, the Achilidae and Issidae families undoubtedly have a greater richness.

However, some families that are common in European fauna are absent, including Membracidae, Ulopidae, Caliscelidae, Dictyopharidae and Flatidae. Published information on species on the Island of Crete was compared with information for Europe as a whole. This revealed an unusual ratio between the two infraorders, Cicadomorpha and Fulgoromorpha, within the group. Due to the greater species richness of Cicadomorpha on a global and European scale, there should be more Cicadomorpha than Fulgoromorpha. This is exactly what is observed in European species: 65% (1,039 species) are Cicadomorpha and 35% (550 species) are Fulgoromorpha. Prior to this study, the species in Crete exhibited a somewhat atypical ratio of 60% Cicadomorpha (87 species) to 40% Fulgoromorpha (58 species). This is mainly due to the thorough studies of the Delphacidae family by Asche, Remane, Hoch and Drosopoulos in the early 1980s. This is also the family with the largest number of known Fulgoromorpha species for Crete. The results of the present study mean that this ratio is beginning to approach the European one. Thirty-seven new species have been added to the fauna of Crete, 30 of which are from the infraorder Cicadomorpha and seven from Fulgoromorpha.

## Acknowledgements

This study was funded by the National Science Fund of the Republic of Bulgaria, grant No. KP-06-N81/4 from 04.12.2024. RA is supported by Research project from the competitive session – 2025, No. 80-10-100/28.05.2025. We would like to thank Dmitry Dmitriev (Champaign, Illinois, USA) for his help in clarifying some nomenclature issues.

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## Supplementary material

### Suppl. material 1: List of Cretan species of Auchenorrhyncha [doi](#)

**Authors:** Angelova, R., Gjonov, I., Trichas, A.

**Data type:** check-list

**Brief description:** A checklist of Cretan species of Auchenorrhyncha, based on literature data and specimens from the Heraklion Museum.

[Download file](#) (204.76 kb)